

Claims

[c1] 1. An oiling system for an internal combustion engine, comprising :
a cylinder block;
an oil pump driven by the engine, and having a pump inlet;
a cover for enclosing a lower part of said cylinder block, with said cover having an oil outlet and an exterior wall; and
an oil pickup comprising:
a first pickup portion located generally outside said exterior wall, with said first pickup portion being in fluid communication with said oil outlet;
a second pickup portion having a first segment extending from said pump pickup through said wall to an exterior surface of said cover and a second segment extending along and through said wall into the interior of the cover; and
a third pickup portion, located inside said cover, with said third pickup portion extending between said second segment of said second pickup portion and through said wall into fluid communication with said first pickup portion.

[c2] 2. An oiling system for an internal combustion engine according to Claim 1, wherein said oil pickup is integrally formed with said cover.

[c3] 3. An oiling system for an internal combustion engine

according to Claim 1, wherein said cover is cast metal and said oil pickup is integrally cast into said cover.

[c4] 4. An oiling system for an internal combustion engine according to Claim 1, wherein said cover is molded resin, with said oil pickup being integrally molded into said cover.

[c5] 5. An oiling system for an internal combustion engine according to Claim 1, wherein said oil pump inlet comprises a spud attached to the oil pump and received within a seal attached to first segment of said second pickup portion.

[c6] 6. An oiling system for an internal combustion engine according to Claim 5, wherein said generally annular seal comprises a lip seal having a circumferential tension spring for maintaining sealing contact between said seal and said oil pump spud.

[c7] 7. An oiling system for an internal combustion engine according to Claim 1, wherein said cover comprises a metallic casting and said oil pickup comprises a metallic tube which is cast in place at the time said cover is cast.

[c8] 8. An oiling system for an internal combustion engine according to Claim 1, wherein said cover comprises molded resin and said oil pickup comprises a metallic tube which is molded in place at the time said cover is molded.

[c9] 9. An oiling system for an internal combustion engine,

comprising:

a cylinder block;

a oil pump attached to the cylinder block and driven by the engine, and having a pump inlet extending downwardly from the oil pump;

a cover for enclosing a bottom portion of said cylinder block, with said cover having an oil reservoir with an oil outlet; and an oil pickup comprising:

a first pickup portion integral with an exterior surface of said cover, with first pickup portion being in fluid communication with said oil outlet;

a second pickup portion extending downwardly through said cover and being in fluid communication with said pump inlet, with said second pickup portion further extending along and integral with an exterior surface of said cover; and

a third pickup portion, located inside said cover and extending through said cover into fluid communication with said first pickup portion and said second pickup portion, with said third pickup portion being integral with said cover.

[c10] 10. An oiling system for an internal combustion engine according to Claim 9, further comprising an axially and radially compliance seal positioned between said oil pump inlet and said first pickup portion.

[c11] 11. An oiling system for an internal combustion engine

according to Claim 10, wherein said axially and radially compliance seal comprises an elastomeric lip seal.

[c12] 12. An oiling system for an internal combustion engine according to Claim 10, wherein said axially and radially compliance seal comprises an annular elastomeric lip seal having a circumferential metallic tension spring for maintaining sealing contact between said seal and said oil pump inlet.

[c13] 13. An oiling system for an internal combustion engine according to Claim 9, wherein said cover comprises cast metal.

[c14] 14. An oiling system for an internal combustion engine according to Claim 9, wherein said cover comprises molded resin.

[c15] 15. An oiling system for an internal combustion engine according to Claim 9, further comprising a filter screen mounted within said reservoir for screening oil passing from said reservoir into said oil outlet.

[c16] 16. An oiling system for an internal combustion engine according to Claim 9, further comprising a plurality of flow guiding vanes applied to the interior surface of the reservoir contained within said cover.

[c17] 17. An oiling system for an internal combustion engine according to Claim 9, wherein said cover comprises cast

metal, with said oil pickup being integrally cast with said cover.

- [c18] 18. An oiling system for an internal combustion engine according to Claim 9, wherein said cover comprises molded resin, with said oil pickup being integrally molded with said cover.